

REMARKS

In the Office Action, the Examiner rejected Claims 1-16, which are all of the pending claims, under 35 U.S.C. §102 as being fully anticipated by U.S. Patent 5,955,894 (Vishwanthaiah, et al.).

Independent claims 1 and 9 are herein being amended to more clearly define the subject matter of these claims.

For the reasons advanced below, Applicants believe that Claims 1 and 9, as well as the dependent Claims 2-8 and 10-16, patentably distinguish over the prior art and are allowable. Accordingly, the Examiner is respectfully asked to reconsider and to withdraw the rejection of Claims 1-16 and to allow these claims.

The present invention relates to controlling the impedance of a driver. In accordance with this invention, a reference cell is used to determine the extent to which the driver impedance needs to be adjusted in order to keep that impedance at, or within a given range of, a desired value. Specifically, a series of resistance devices, such as transistors, are selectively activated to determine a digital signal that is then transmitted to the driver to adjust the impedance thereof.

Vishwanthaiah, et al, similarly, relates to controlling the impedance of a driver, and also selectively activates a series of resistors to determine a digital signal that is sent to the driver to control the impedance thereof.

There are, however, several important differences between this invention and the procedure shown in Vishwanthaiah, et al. One important difference is that, with this

the transistors are operated in accordance with a thermometer code scheme. More specifically, with the present invention, during each given period, a number of resistance devices are activated, for example starting from zero, and a digital signal representing this number of devices activated during this period is sent to the driver to control or to adjust the impedance thereof. In contrast, with the system shown in Vishwanthaiah, et al, no more than one transistor, or bit, is changed during any given cycle (see Column 5, lines 3-11).

Independent Claims 1 and 9 are being amended to more clearly describe this difference. In particular, Claim 1, which is directed to a method of impedance control, is being amended to indicate that during each defined period, a number of resistance devices are activated until voltage of a reference node becomes within a given range of the reference voltage. This claim is also being amended to include the limitation that the digital signal, which is transmitted to the I/O cell to adjust the impedance thereof, represents this number of resistance devices activated during said period. Analogous amendments are being made to Claim 9, which is directed to a circuit for controlling the impedance of an I/O cell.

This feature of the present invention is of utility because it provides a finer resolution than is provided by the procedure of Vishwanthaiah, et al. Also, the present invention, in comparison to Vishwanthaiah, et al, may be implemented in a simpler structure, since the invention eliminates the need to latch activated resistance devices of the reference cell between periods.

Because of the above-discussed differences between Claims 1 and 9 and the prior art, and because of the advantages associated with those differences, these claims patentably distinguish over the prior art and are allowable. Claims 2-8 are dependent from, and are allowable with, Claim 1; and, similarly, Claims 10-16 are dependent from Claim 9 and are allowable therewith.

For the reasons set forth above, the Examiner is respectfully requested to reconsider and to withdraw the rejection of Claims 1-16 under 35 U.S.C. §102, and to allow these claims. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

John S. Sensny
John S. Sensny
Registration No. 28,757

Scully, Scott, Murphy & Presser
400 Garden City Plaza
Garden City, New York 11530
(516) 742-4343
JSS:jy

FAX RECEIVED

AUG 28 2003

GROUP 2800

OFFICIAL